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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the amendment filed 10 December 2009, claims 18-27, 33-44 and 46-51 remain pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 43 is rejected under 35 U.S.C. 102(b) as being anticipated by Salette (US Patent No. 6,155,840).

Regarding claim 43, Salette discloses a learning server (102) connected to a student terminal (108) having an operating portion capable of being operated by a student, and a display portion on which an image visible by the student is displayed and an instructor terminal having a display portion on which an image visible by an instructor is displayed, so as to freely communicate, said learning server transmitting and receiving learning information relating to a learning with respect to the student terminal and the instructor terminal, comprising: a connecting means for connecting the learning server to said student terminal and said instructor terminal; and a transmitting means for sequentially transmitting to the instructor terminal a signal for sequentially displaying an image relating to learning operation information on the basis of operation of the operating portion on the display portion of the student terminal in response to

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the learning information sequentially transmitted to the student terminal and displayed on the display portion of the student terminal (column 7, line 59 – column 8, line 7; column 8, line 62 – column 9, line 4; see Fig. 1), said learning operation information including character information resulting from operation of a keyboard (column 9, lines 51-61; column 8, line 62 – column 9, line 4).

4. Claims 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton (US Patent No. 5,176,520).

Regarding claims 49-51, Hamilton discloses a program comprising instructions implemented on a student terminal (151-161 – see Fig. 1) having an operating portion capable of being operated by a student and a display portion (102) on which an image visible by the student is displayed, said instructions including instructions for implementing a display step of displaying learning information relating to a learning on the display portion of the student terminal, a collecting step of sequentially collecting a learning operation information on the basis of operation of the operating portion of the student terminal in response to the learning information displayed on the display portion in accordance with the display step, said learning operation information including pointer information resulting from operation of a pointer moving device (stylus – see Fig. 6a), and a transmitting step of sequentially transmitting to an instructor terminal a signal for displaying the learning operation information sequentially collected in accordance with the collecting step on a display portion in the instructor terminal (106) connected so as to freely communicate (column 2, lines 25-64) (as per claim 49), a program comprising instructions implemented on an instructor terminal having an operating portion

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capable of being operated by an instructor and a display portion on which an image visible by the instructor is displayed, said instructions including instructions for implementing a display step of displaying instruction information relating to an instruction on the display portion of the instructor terminal, said instruction operation information including pointer information resulting from operation of a pointer moving device (stylus – see Fig. 6a), a collecting step of sequentially collecting instruction operation information on the basis of operation of the operating portion of the instructor terminal, in correspondence to the instruction information displayed on the display portion in accordance with the display step, and a transmitting step of sequentially transmitting a signal to a student terminal for displaying the instruction operation information sequentially collected in accordance with the collecting step on a display portion in the student terminal connected so as to freely communicate (column 2, lines 25-64) (as per claim 50), a program comprising instructions implemented on a student terminal having an operating portion capable of being operated by a student and a display portion on which an image visible by the student is displayed, said instructions including instructions for implementing a display step of displaying learning information relating to a learning on the display portion of the student terminal, a collecting step of sequentially collecting learning operation information on the basis of operation of the operating portion of the student terminal in response to the learning information displayed on the display portion in accordance with the display step, said learning operation information including pointer information resulting from operation of a pointer moving device, and a transmitting step of sequentially transmitting a signal to another student terminal and an instructor terminal for displaying the learning operation information sequentially collected in accordance with the collecting step on a display portion in said another student terminal and the

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instructor terminal connected so as to freely communicate (column 2, lines 25-64) (as per claim 51).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 19 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro et al. (US Patent No. 4,715,818) in view of Salette (US Patent No. 6,155,840).

Regarding claim 19, Shapiro discloses a learning system comprising: a student terminal having an operating portion capable of being operated by a student, a display portion on which an image visible by the student is displayed, and a display control means for displaying the image on the display portion, and an instructor terminal having a display portion displaying an image visible by an instructor, a display control means for displaying an image on the display portion, and a voice generating means for generating a voice, so as to freely communicate, said

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learning system transmitting and receiving learning information relating to a learning between the student terminal and the instructor terminal, wherein the student terminal has a learning operation information collecting means for sequentially collecting learning operation information on the basis of an operation of the operating portion by the student in response to the learning information displayed on the display portion of the student terminal (column 2, line 30 – column 3, line 11), (column 9, lines 51-61). Shapiro does not explicitly disclose said learning operation information includes character information resulting from operation of a keyboard, a photographing means for sequentially photographing face information of the student, a voice collecting means for sequentially collecting voice information generated by the student, and a transmitting means for sequentially transmitting the face information, the learning operation information and the voice information to the instructor terminal, the display control means in the instructor terminal has a function of sequentially displaying the image relating to the face information and the learning operation information on the display portion of the instructor terminal, and the voice generating means in the instructor terminal has a function of generating the voice information (as per claim 19). However, Salette discloses a student/instructor collaboration system where video cameras are used to provide a sequential image of the student on the instructor's screen, and a sequential image of the instructor on the student's screen (column 4, line 66 - column 5, line 21), and said learning information includes character information (column 9, lines 51-61). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Shapiro by adding the video conferencing system taught by Salette, with the motivation of allowing the instructor to see and communicate with students in remote locations.

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Regarding claim 39, Shapiro and Salette do not explicitly disclose the student terminal has a selecting means for selecting whether making the function of transmitting the learning operation information by the transmitting means effective or ineffective. However, OFFICIAL NOTICE was taken in the previous Office Action dated 01 April 2009 that both the concepts and advantages of allowing a user to activate or inactivate a learning operation such as that taught by Shapiro were old and well known and expected in the art at the time the invention was made. Since the Applicant did not traverse the officially noticed facts by specifically pointing out supposed errors, the officially noticed facts taken in the rejection dated 01 April 2009 are now considered admitted prior art. See MPEP § 2144.03. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Shapiro and Salette by providing a selecting means for making the operation effective or ineffective, as required, with the motivation of allowing the user to being participating when he is ready.

8. Claims 18, 20-22, 38 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro et al. (US Patent No. 4,715,818) in view of Hamilton (US Patent No. 5,176,520).

Regarding claims 18 and 20-22, Shapiro discloses a learning system comprising: a student terminal (14) having an operating portion capable of being operated by a student, a display portion (22) on which an image visible by the student is displayed, and a display control means for displaying the image on the display portion; and an instructor terminal (12) having a display portion (18) displaying an image visible by an instructor, and a display control means for displaying an image on the display portion, so as to freely communicate, said learning system



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transmitting and receiving learning information relating to a learning between the student terminal and the instructor terminal, wherein the student terminal has a learning operation information collecting means for sequentially collecting learning operation information (student's work) on the basis of operation of the operating portion by the student in response to the learning information displayed on the display portion of the student terminal, and a transmitting means for sequentially transmitting the learning operation information to the instructor terminal, and the display control means in the instructor terminal has a function of sequentially displaying images relating to the learning operation information on the display portion of the instructor terminal (column 2, line 30 – column 3, line 11) (as per claim 18), a learning system comprising an instructor terminal (12) having an operating portion capable of being operated by an instructor, a display portion (18) on which an image visible by the instructor is displayed, and a display control means for displaying an image on the display portion; and a student terminal (14) having a display portion (22) displaying an image visible by a student, and a display control means for displaying the image on the display portion, so as to freely communicate, said learning system transmitting and receiving learning information relating to a learning between the student terminal and the instructor terminal, wherein the instructor terminal has an instructor operation information collecting means for sequentially collecting instructor operation information (corrections and instructions) on the basis of operation of the operating portion, and a transmitting means for sequentially transmitting the instructor operation information to the student terminal, and the display control means in the student terminal has a function of sequentially displaying images relating to the instructor operation information on the display portion of the student terminal (column 2, line 64 – column

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3, line 11) (as per claim 20), a learning system comprising a student terminal having an operating portion capable of being operated by a student, a display portion on which an image visible by the student is displayed, and a display control means for displaying the image on the display portion; and an instructor terminal having a display portion displaying an image visible by an instructor, and a display control means for displaying an image on the display portion, so as to freely communicate, said learning system transmitting and receiving learning information relating to a learning between the student terminal and the instructor terminal (column 2, line 30 – column 3, line 11) (as per claim 21), and a learning system comprising: an instructor terminal having an operating portion capable of being operated by an instructor, a display portion on which an image visible by the instructor is displayed, and a display control means for displaying an image on the display portion; and a student terminal having an operating portion capable of being operated by a student, a display portion displaying an image visible by the student, and a display control means for displaying the image on the display portion, so as to freely communicate, said learning system transmitting and receiving learning information relating to a learning between the student terminal and the instructor terminal, wherein the student terminal has a learning operation information collecting means for sequentially collecting learning operation information on the basis of operation of the operating portion by the student in response to the learning information displayed on the display portion of the student terminal, and a transmitting means for sequentially transmitting the learning operation information to the instructor terminal, the display control means in the instructor terminal has a function of sequentially displaying the image relating to the learning operation information on the display portion of the instructor terminal, the instructor terminal has an instructor operation information

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collecting means for sequentially collecting an instructor operation information on the basis of operation of the operating portion, and a transmitting means for sequentially transmitting the instructor operation information to the student terminal, and the display control means in the student terminal has a function of sequentially displaying images relating to the instructor operation information on the display portion of the student terminal (column 2, line 30 – column 3, line 11) (as per claim 22).

Shapiro does not explicitly disclose the instructor terminal and another of the student terminal has a learning operation information collecting means for sequentially collecting learning operation information on the basis of an operation of the operating portion of one of the student terminal, and a transmitting means for sequentially transmitting the learning operation information to the instructor terminal and the other of the student terminal, and the display control means in the other student terminal and the instructor terminal have a function of sequentially displaying the image relating to the learning operation information on the display portions of the other student terminal and the instructor terminal (as per claim 21), and said learning operation information includes pointer information resulting from operation of a pointer moving device (as per claims 18, 20 and 22). However, Hamilton discloses, in a similar screen-sharing instructor/student collaboration system, the idea of transmitting the material on one student's screen to the screens of the rest of the students in the class (column 2, lines 55-57), and the learning operation information includes positional information (via stylus – see Fig. 6a). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Shapiro by adding transmitting the material on the student's screen to other students

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and allowing the student terminal to collect positional information, as taught by Hamilton, with the motivation of allowing the students to learn from each other as well as the instructor.

Regarding claims 38 and 40-42, Shapiro and Hamilton do not explicitly disclose the student terminal has a selecting means for selecting whether making the function of transmitting the learning operation information by the transmitting means effective or ineffective. However, OFFICIAL NOTICE was taken in the previous Office Action dated 01 April 2009 that both the concepts and advantages of allowing a user to activate or inactivate a learning operation such as that taught by Shapiro were old and well known and expected in the art at the time the invention was made. Since the Applicant did not traverse the officially noticed facts by specifically pointing out supposed errors, the officially noticed facts taken in the rejection dated 01 April 2009 are now considered admitted prior art. See MPEP § 2144.03. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Shapiro and Hamilton by providing a selecting means for making the operation effective or ineffective, as required, with the motivation of allowing the user to being participating when he is ready.

9. Claims 23, 25, 27, 33, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro et al. (US Patent No. 4,715,818) in view of Hamilton (US Patent No. 5,176,520), and further in view of DeNicola et al. (US Patent No. 6,288,753 B1).

Regarding claims 23, 25, 27, 33, 35 and 37, the combination of Shapiro and Hamilton does not explicitly disclose the instructor terminal has a transmitting means for transmitting question information relating to the learning to the student terminal, and the learning operation

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information collecting means in the student terminal has a function of sequentially collecting the learning operation information on the basis of the operation of the operating portion in correspondence to the question information displayed on the display portion of the student terminal (as per claims 23, 25 and 27), and the instructor terminal has a learning memory means for storing at least one of the learning operation information (as per claims 33, 35 and 37). However, DeNicola discloses an interactive learning system where an instructor transmits question information to a student terminal so that the student can respond to the question (column 4, line 51 – column 5, line 7), and storing the student's answers in a database (learning operation information) (column 13, lines 37-48). It would have been obvious to modify the combination of Shapiro and Hamilton by adding the exam feature and storing means taught by DeNicola, with the motivation of allowing the instructor to determine whether the students are learning the information being taught.

10. Claims 24 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro et al. (US Patent No. 4,715,818) in view of Salette (US Patent No. 6,155,840), and further in view of DeNicola et al. (US Patent No. 6,288,753 B1).

Regarding claims 24 and 34, Shapiro and Salette do not explicitly disclose the instructor terminal has a transmitting means for transmitting question information relating to the learning to the student terminal, and the learning operation information collecting means in the student terminal has a function of sequentially collecting the learning operation information on the basis of the operation of the operating portion in correspondence to the question information displayed on the display portion of the student terminal (as per claim 24), and the instructor terminal has a

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learning memory means for storing at least one of the learning operation information (as per claim 34). However, DeNicola discloses an interactive learning system where an instructor transmits question information to a student terminal so that the student can respond to the question (column 4, line 51 – column 5, line 7), and storing the student's answers in a database (learning operation information) (column 13, lines 37-48). It would have been obvious to modify the teachings of Shapiro and Salette by adding the exam feature and storing means taught by DeNicola, with the motivation of allowing the instructor to determine whether the students are learning the information being taught.

11. Claims 26 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapiro et al. (US Patent No. 4,715,818) in view of Hamilton (US Patent No. 5,176,520), and further in view of DeNicola et al. (US Patent No. 6,288,753 B1).

Regarding claims 26 and 36, Shapiro and Hamilton do not explicitly disclose the instructor terminal has a transmitting means for transmitting question information relating to the learning to the student terminal, and the learning operation information collecting means in the student terminal has a function of sequentially collecting the learning operation information on the basis of the operation of the operating portion in correspondence to the question information displayed on the display portion of the student terminal (as per claim 26), and the instructor terminal has a learning memory means for storing at least one of the learning operation information (as per claim 36). However, DeNicola discloses an interactive learning system where an instructor transmits question information to a student terminal so that the student can respond to the question (column 4, line 51 – column 5, line 7), and storing the student's answers in a

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database (learning operation information) (column 13, lines 37-48). It would have been obvious to modify the teachings of Shapiro and Hamilton by adding the exam feature and storing means taught by DeNicola, with the motivation of allowing the instructor to determine whether the students are learning the information being taught.

12. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salette (US Patent No. 6,155,840) in view of DeNicola et al. (US Patent No. 6,288,753 B1).

Regarding claim 44, Salette discloses the learning server has a question information memory means for storing question information relating to a learning, and the transmitting means has a function of transmitting the question information to the student terminal in correspondence to a question request signal from the instructor terminal (column 9, lines 38-50). It is noted that Salette does not explicitly disclose a function of sequentially transmitting a signal for sequentially displaying an image relating to the learning operation information on the basis of the operation of the operating portion on the display portion of the instructor terminal, to the instructor terminal, in correspondence to the question information sequentially transmitted from the student terminal and displayed on the display portion of the student terminal. However, DeNicola discloses a similar system where student can respond to the questions, as required (column 4, line 51 – column 5, line 7). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Salette by allowing the student to respond to the questions, as taught by DeNicola, with the motivation of allowing the instructor to determine whether the student is learning the material.

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13. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salette (US Patent No. 6,155,840) in view of DeNicola et al. (US Patent No. 6,288,753 B1), and further in view of Holtz et al. (US Patent No. 6,909,874 B2)

Regarding claim 47, Salette and DeNicola do not explicitly disclose the learning server has a billing means for billing with respect to the student terminal and/or the instructor terminal, in the case that the function in the transmitting means is made effective. However, Holtz discloses a similar computer-based educational system that includes a billing process for billing students who active the service (column 18, line 54 – column 19, line 3). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Salette and DeNicola by adding the billing feature taught by Holtz, with the motivation of providing a mechanism for the student to pay for the services.

14. Claims 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salette (US Patent No. 6,155,840) in view of Holtz et al. (US Patent No. 6,909,874 B2)

Regarding claims 46 and 48, Salette does not explicitly disclose the learning server has a billing means for billing with respect to the student terminal and/or the instructor terminal, in the case that the function in the transmitting means is made effective. However, Holtz discloses a similar computer-based educational system that includes a billing process for billing students who active the service (column 18, line 54 – column 19, line 3). It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Salette by adding the billing feature taught by Holtz, with the motivation of providing a mechanism for the student to pay for the services.



***Response to Arguments***

15. Applicant's arguments filed 03 August 2009 have been fully considered but they are not persuasive. Applicant argues that none of the cited references disclose the required feature of a learning operation information collecting means for sequentially collecting learning operation information on the basis of operation of the operating portion by the student in response to the learning information displayed on the display portion of the student terminal, where the learning operation information includes character information, pointer information, decision information, or cancellation information. However, it is noted that the features upon which applicant relies (i.e., real-time viewing of the student's display by the instructor) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The use of the term "sequentially collecting" learning operation information is noted, however in the broadest reasonable interpretation, this does not limit the claim to such a real-time viewing capability, as applicant appears to argue. In the broadest reasonable interpretation, "sequentially " means only that the collecting of learning operation information is done in a sequence, or done repetitively, not necessarily in real-time fashion.

With respect to the Salette reference, applicant argues that the only learning operation information (feedback) taught by Salette is polling the audience, and that this is not the same as sequentially collecting learning operation information that includes either character, pointer, decision, or cancellation information. However, applicant is directed to for example, column 9, lines 51-61 of Salette, which clearly states that audience members may input feedback into their

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terminal in the form of text (character information), and the text is visible on the presenter's display. Salette also discloses decision-type learning operation information, in which the audience member may choose a pre-determined message be shown to the presenter such as "I'm here", "I need help", etc. (column 9, lines 5-13). Accordingly, Salette discloses sequentially collecting learning operation information including at least character information.

With respect to the Hamilton reference, applicant argues that the information obtained from the movement of the stylus taught by Hamilton does not constitute pointer information resulting from operation of a pointer moving device. However, according to the broadest reasonable definition of pointer information afforded by one of ordinary skill in the art, the lines created as the result of drawing with a stylus constitute pointer information, as required. A stylus is widely regarded as a pointing device to those of ordinary skill in the art, whether it is being used to draw, make selections, or otherwise interact with an electronic screen. Accordingly, Hamilton discloses sequentially collecting learning operation information including at least pointer information.

***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Egloff whose telephone number is (571) 270-3548. The examiner can normally be reached on M-F 7:30am - 5:00 pm EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached at (571) 272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Peter Egloff

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3715